SECTION 01 3300

SUBMITTAL PROCEDURES

****

LANL MASTER SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the ESM General POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within “stars” during editing.

Specification developed for ML-3 / ML-4 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

****

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Transmittal of submittals

B. Submittal procedures

C. Definition of submittal types for construction

D. Submittals for contract closeout

E. [Submittal list]

1.2 RELATED SECTIONS

A. Section 01 7839, Project Record Documents

1.3 TRANSMITTAL OF SUBMITTALS

A. Provide submittals as indicated in the specific specification sections.

B. Use a Routing Sheet to transmit submittals in the proper sequence.

1. Obtain copies at the preconstruction conference for use during construction.

1.4 SUBMITTAL PROCEDURE

A. Review submittals prior to transmittal to determine and verify field measurements, field construction criteria, manufacturers’ catalog numbers, and conformance of submittals with Contract Documents. To certify compliance with these specifications:

1. Sign or initial each sheet of shop drawings.

2. Sign or initial each label on samples.

3. As a minimum, sign or initial the cover sheet of bound material.

B. For any proposed deviation from the Contract Documents, submit a written request to the Contract Administrator.

C. Submit for review the following number of copies of submittals:

1. [Seven] copies for AE/LANL use.
2. Additional number of copies for Contractor use as determined by the Contractor.

D. Submittal Clarity:

1. Drawings shall be clear and legible.
2. Manufacturer's Literature: Submit a minimum of one original of all manufacturers' printed material. Remaining number of submittals may be reproductions. Reproductions of original material shall be clear and legible.

E. A partial submittal consists of only a portion of the total required for a project. This is acceptable when it is prudent to submit for review certain submittals before the remaining submittals are available. Submit all items concurrently for which, due to coordination concerns, a simultaneous review is required. Include a separate Routing Sheet indicating the submittals transmitted with each numbered submittal package.

F. After review of the submittal package the "Action Code" will be indicated on the Routing Sheet and returned to the Contractor. Review of submittals will be indicated on each Routing Sheet by appropriate signature, stamp, and date. The number of copies of each submittal noted above for LANL use will be retained and the balance will be returned to the Contractor. The Contractor shall allow a minimum of [14] calendar days for return of submittals.

G. LANL will utilize the following "Action Codes" to indicate the status of submittals resulting from the review, and the action required of the Contractor.

A - Reviewed. No comments.

B - Reviewed. Make corrections noted. Resubmission not required.

C - Reviewed. Revise and resubmit.

H. Use a Routing Sheet with all resubmittals indicating each item's submittal number and type suffixed "R1" for the first resubmittal, "R2" for the second resubmittal, and so forth.

I. Do not fabricate products or begin Work that requires submittals before such submittals are approved.

1. Exceptions: Field tests and inspection reports, concrete batch test reports, and contract closeout submittals.

1.5 DEFINITIONS OF SUBMITTAL TYPES FOR CONSTRUCTION

A. Calculations: The methods and results of calculations in documented form where specified.

B. Catalog Data: Standard printed information on materials, products and systems, which shows performance characteristics, dimensions, material of fabrication, and other characteristics necessary to assure conformity with the design requirements. Where other items or information not related to the work of this project are included in the literature submitted, the item(s) and/or information applicable to this project shall be clearly marked.

C. Certifications: A written statement, signed by a qualified party, attesting that items or services are in accordance with specified requirements. Typically, this written statement is accompanied by additional information to substantiate the statement.

D. Electrical Diagrams: Drawings showing the point-to-point wiring of a piece of equipment or between pieces of equipment in a system. Includes Loop Descriptions (a narrative description of the logic and interlocks associated with each I&C system feature and Ladder Logic Diagrams (a graphical description of the logic and interlocks associated with each I&C system feature).

E. Installation Instructions: Manufacturer's instructions, step-by-step if necessary, showing the field installation of parts, components, equipment, and other similar items.

F. Material List/Parts List/Design Mixes: A list of system or material components.

G. Performance Data/Curves: Performance data and/or curves for the proposed equipment to show compliance with contract documents.

H. Samples/Colors: Samples, including colors, of proposed materials.

I. Shop Drawings: Drawings necessary to show fabrication details to ensure compliance with contract documents.

J. Test Reports: Results of specified test requirements.

1.6 SUBMITTALS FOR CONTRACT CLOSEOUT

A. Operation and Maintenance Data: Submit copies of data at least 15 days prior to any instruction of LANL personnel. Provide electronic submittal of everything in PDF format on a CD or DVD (manufacturers files preferred; scanned acceptable when unavailable). Also provide data in 8 1/2 x 11 inch 3-side-ring binder with durable plastic covers.

1. Provide binders with clear pockets on front and binding edge for insertion of titles. Binders shall be not more than 75 percent full.
2. Prepare binder covers with printed title, “OPERATION AND MAINTENANCE INSTRUCTIONS/WARRANTIES,” subject matter of binder, and title of project.
3. Internally subdivide the binder contents with permanent page dividers, logically organized as described below, with tab titling clearly printed under reinforced laminated plastic tabs.
4. Prepare a Table of Contents for each volume, with each product or system description identified, printed on 24-pound white paper. Organize the O&M manual by specification section.
    a. Part 1: Directory-listing names, addresses, and telephone numbers of Contractors and major equipment suppliers.
    b. Part 2: Operation and maintenance instructions arranged by specification section. For each category, identify names, addresses, and telephone numbers of Contractors and suppliers.
5. Content for mechanical equipment and systems, as appropriate.
    a. Description of Unit and Component Parts:
        1) Function, normal operating characteristics, and limiting conditions.
        2) Performance curves, engineering data and tests.
        3) Complete nomenclature and commercial number of replaceable parts.
        4) Certification (specific) such as ASME for boiler.

5) Complete nameplate data for each major piece of equipment (i.e., boilers, chillers, cooling towers, pumps, fans, heat exchangers, and similar items).

b. Operating Procedures:

1) Start-up, break-in, routine and normal operating instructions.

2) Regulation, control stopping, shutdown and emergency instructions.

3) Summer and winter operating instructions.

4) Special operating instructions

c. Maintenance Procedures:

1) Routine operations.

2) Guide to "trouble-shooting."

3) Disassembly, repair and reassembly.

4) Alignment, adjusting and checking.

5) Recommended preventive maintenance scope and frequency

6) Recommended predictive maintenance scope and frequency

d. Servicing and Lubrication Schedule:

1) List of lubricants required.

e. Manufacturer's printed operating and maintenance instructions for the exact item of equipment supplied.

f. Description of sequence of operation by control manufacturer.

g. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.

1) Predicted life of parts subject to wear.

2) Items/quantities recommended to be stocked as spare parts.

h. Control diagrams by controls vendor and as-installed control drawing by Contractor.

i. Each Contractor’s Coordination Drawings: As-installed color-coded piping diagrams.

j. Table of valve tag numbers, with the location, make, model, size, and function of each valve.

k. Other data as required under pertinent sections of specifications.

6. Content for each electrical system (e.g. power, lighting, communications, etc.) as appropriate.

a. Description of System and Component Parts:

1) Function, normal operating characteristics, and limiting conditions.

2) Performance curves, engineering data and tests.

3) Complete nomenclature and commercial number of replaceable parts.

4) Complete nameplate data for each major piece of equipment (i.e. switchgear, panelboards, transformers, motor control centers, motors

1HP and larger, adjustable frequency controllers (VFD), and similar items).

5) One-line diagrams, riser diagrams, and systems diagrams.

6) Circuit directories of panelboards.

7) As-Installed wiring diagrams, i.e. ladder diagram, point-to-point diagrams, and similar items.

8) Final electrical load analysis.

9) Final short circuit study and breaker settings.

10) Final Coordination study.

b. Operating Procedures:

1) Routine and normal operating instructions.

2) Sequences required.

3) Special operating instructions.

c. Maintenance Procedures:

1) Maintenance schedule based on manufacturer's instructions.

2) Routine maintenance inspections, test, and acceptance criteria.

3) Guide to "trouble-shooting."

4) Disassembly, repair and reassembly instructions.

5) Adjustment and checking.

d. Manufacturer's printed operating and maintenance instructions for the exact item of major equipment supplied (i.e., switchgear, panelboards, transformers, motor control centers, motors 1HP and larger, adjustable frequency controllers (VFD), and similar items).

e. Equipment manufacturer's parts, illustrations, assembly drawings, and diagrams required for maintenance.

1) Predicted life of parts subject to wear or deterioration.

2) Items recommended for stock as spare parts.

f. Other O&M data as required under pertinent sections of specifications.

7. Content for each Instrumentation and Control Systems, including PLC and pneumatic systems, as applicable.

a. Description of System and Component Parts:

1) Catalog data containing information required for service, future additions or substitutions.

2) Function, normal operating characteristics, and limiting conditions.

3) Performance curves, engineering data and tests.

4) Complete nomenclature and commercial number of replaceable parts.

b. Operating Procedures:

1) Routine and normal operating instructions.

2) Sequences required.

3) Special operating instructions.

c. Maintenance Procedures:

1) Routine operations.

2) Calibration procedure and data

3) Periodic maintenance and surveillance requirements.

4) Guide to “trouble-shooting.”

5) Disassembly, repair and reassembly.

6) Adjustment and checking.

d. Special details and qualification

1) Seismic and Environmental qualifications

2) Mounting restrictions, instructions, and details.

3) Service connection characteristics: i.e., size, type, locations, voltage, current, etc.

4) Design service life.

5) Certification of conformance

6) Material of construction

7) Weight and center of gravity.

e. Provide the following drawings:

1) Logic diagrams for control schemes.

2) Ladder diagram for electrical control schemes.

3) Loop drawings and descriptions for instrument loops.

4) Electrical schematics and Wiring diagrams

5) Instrument piping and tubing drawings.

6) Point-to-point diagrams

7) Instrument and control panel construction/layout diagrams with component names.

f. Manufacturer’s printed operating and maintenance instructions.

g. List of original manufacturer’s spare parts, manufacturer’s current prices, and recommended quantities to be maintained in storage.

h. Electronic copy of final (after functional acceptance testing is completed) installed PLC or Building Automation System logic/software.

i. Other data as required under pertinent sections of specifications.

8. Functional Testing Plan: Provide a field verification plan that demonstrates conformance of the installed system with the contract requirement.

9. Digital video files of training that is provided as required.

10. Provide a description of the normal configuration (valve positions, set points, switch positions, etc.) of the facility on the date of final acceptance. The normal configuration should be organized by specification section and should be in agreement with operating procedures.
11. Prepare and include additional data when the need for such data becomes apparent during instruction of LANL personnel.
12. Provide additional requirements for operating and maintenance data in accordance with the respective sections of specifications.
13. Submit [2] copies of completed volume in near-final form 15 days prior to final inspection. [One] copy will be returned after final inspection with LANL's/AE's comments. Revise content of documents as required prior to final submittal.
14. Submit 4 revised final volumes within [30] days after final inspection.

B. Project Record Documents

1. Provide the following Project Record Documents in accordance with Section 01 7839:
   a. As-built drawings
   b. Master Equipment list and Master Document list per Eng Standards Manual Chapter 1 Section Z10
   c. Quality assurance conformance and receipt inspection test reports

C. Spare Parts and Maintenance Materials

1. Provide products, spare parts, maintenance materials, and extra materials in quantities specified in individual specification sections.
2. Deliver to Project site and place in location as directed by Contract Administrator; obtain receipt prior to final payment.

D. Warranties

1. Provide [notarized] copies.
2. Execute and assemble documents from Contractors, suppliers, and manufacturers.
3. Provide Table of Contents and assemble in binder with Operation and Maintenance Data.
4. For items of Work delayed beyond date of Substantial completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.7 SUBMITTAL LIST

****
The submittal list is optional. The LANL Project Manager will determine if a submittal list is required.
****

A. Submittal List: Submittals shall be made for the items of hardware, equipment, and materials indicated in the attached Submittal List. Submittals marked with an asterisk (*) shall be in reproducible form.

B. The submittal list is a tabulation of the requirements identified in other specification sections. Any omission of an item from this list does not relieve the Contractor from the responsibility for submitting the item required by other specification sections.

C. Obtain copy of submittal list, including submittals that will be reviewed concurrently by LANL and AE, at the preconstruction meeting.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

****
Do not delete the following reference information:
****

FOR LANL USE ONLY

This project specification is based on LANL Master Specification 01 3300 Rev. 1, dated July 10, 2006.

Submittal Types Key			
CA =	Calculations	SC =	Samples/Colors
CD =	Catalog Data	SD =	Shop Drawings
CT =	Certifications	TR =	Test Reports
ED =	Electrical Diagrams	OM =	Operations & Maintenance Data
II =	Installation Instructions	RD =	Project Record Documents
ML = Mixes	Materials/Parts List/Design	SP = Materials	Spare Parts and Maintenance
PD =	Performance Data - Curves	WA =	Warranties

SUBMITTAL LIST

			CONSTRUCTION										CONTRACT CLOSEOUT			
SUBMITTAL NO.	SPEC SECTION	DESCRIPTION	CA	CD	CT	II	ML	PD	SC	SD	TR	ED	OM	RD	SP	WA

END OF SECTION